

Remarks

Claims 1-50 are now pending in this application. Claims 1-50 are rejected. Claims 1, 24, and 47 have been amended. No new matter has been added.

In accordance with 37 C.F.R. 1.136(a), a three-month extension of time is submitted herewith to extend the due date of the response to the Office Action dated June 25, 2004 for the above-identified patent application from September 25, 2004 through and including December 27, 2004. In accordance with 37 C.F.R. 1.17(a)(3), authorization to charge a deposit account in the amount of \$1020.00 to cover this extension of time request also is submitted herewith.

The rejection of Claims 1-50 under 35 U.S.C. § 102(a) as being anticipated by Klapper et al. (U.S. Patent No. 6,448,982) is respectfully traversed. Applicant respectfully submits that Klapper et al. is not a prior art reference under 35 U.S.C. § 102(a) because the '982 was patented on September 10, 2002, which is not before the effective filing date, May 1, 2000, of the above-referenced patent application. However, Applicant proceeds with an assumption that Klapper et al. is a prior art reference under 35 U.S.C. § 102(e).

Klapper et al. describe a system including a matrix. Once all information for a plurality of causes, effects, and intersections, required for the matrix, is input using a programming tool, the information is directly transferred to a matrix functional unit (MFU) (18) of a programmable logic controller (PLC) (78) (column 4, lines 13-17). A saved copy of the matrix can be accessed and edited by simply retrieving the saved copy and editing the matrix using a matrix programming tool thereby creating a new matrix (column 10, lines 17-20). The new matrix can be compared to the original matrix (column 10, lines 20-22). In addition, a matrix database stored in the PLC is saved in a format that enables a user to upload the database to a computer (6) for editing, modification and/or comparison to the saved copy of the matrix and the matrix database and transferring the edited/modified version back to the PLC (column 10, lines 21-26).

Claim 1 recites a method for Cause and Effect application logic implementation, the method comprising the steps of "defining a formal methodology

for specification of functional requirements for a target system based upon Cause and Effect notation and function blocks, wherein said defining includes generating a function block applied to control a target system that cannot be controlled by applying the Cause and Effect notation; employing a computer-aided specification tool-set to support capture and validation of functional requirements; and employing a software module to directly execute Cause and Effect application logic.”

Klapper et al. do not describe or suggest a method for Cause and Effect application logic implementation as recited in Claim 1. Specifically, Klapper et al. do not describe or suggest defining a formal methodology for specification of functional requirements for a target system based upon Cause and Effect notation and function blocks, where defining includes generating a function block applied to control a target system that cannot be controlled by applying the Cause and Effect notation. Rather, Klapper et al. describe inputting all information for a plurality of causes, effects, and intersections, required for a matrix, by using a programming tool, and transferring the information directly to a PLC. Klapper et al. further describe uploading a database to a computer for editing, modification and/or comparison to a saved copy of the matrix and transferring the edited/modified version back to the PLC. Accordingly, Klapper et al. do not describe or suggest generating a function block applied to control a target system that cannot be controlled by applying the Cause and Effect notation. For the reasons set forth above, Claim 1 is submitted to be patentable over Klapper et al.

Claims 2-23 depend, directly or indirectly, from independent Claim 1. When the recitations of Claims 2-23 are considered in combination with the recitations of Claim 1, Applicant submits that Claims 2-23 likewise are patentable over Klapper et al.

Claim 24 recites a computer for Cause and Effect application logic implementation, the computer configured to “receive a defined formal methodology for specification of functional requirements for a target system based upon Cause and Effect notation and function blocks, wherein the function blocks are applied to control a target system that cannot be controlled by applying the Cause and Effect notation; capture at least one functional requirement; validate at least one captured functional requirement; and directly execute Cause and Effect application logic.”

Klapper et al. do not describe or suggest a computer for Cause and Effect application logic implementation as recited in Claim 24. Specifically, Klapper et al. do not describe or suggest a computer configured to receive a defined formal methodology for specification of functional requirements for a target system based upon Cause and Effect notation and function blocks, where the function blocks are applied to control a target system that cannot be controlled by applying the Cause and Effect notation. Rather, Klapper et al. describe inputting all information for a plurality of causes, effects, and intersections, required for a matrix, by using a programming tool, and transferring the information directly to a programmable logic controller. Klapper et al. further describe uploading a database to a computer for editing, modification and/or comparison to a saved copy of the matrix and transferring the edited/modified version back to the PLC. Accordingly, Klapper et al. do not describe or suggest the function blocks applied to control a target system that cannot be controlled by applying the Cause and Effect notation. For the reasons set forth above, Claim 24 is submitted to be patentable over Klapper et al.

Claims 25-46 depend, directly or indirectly, from independent Claim 24. When the recitations of Claims 25-46 are considered in combination with the recitations of Claim 24, Applicant submits that Claims 25-46 likewise are patentable over Klapper et al.

Claim 47 recites a database comprising “data relating to Cause and Effect notation; and data relating to at least one Function block applied to control a target PLC system that cannot be controlled by applying the Cause and Effect notation.”

Klapper et al. do not describe or suggest a database as recited in Claim 47. Specifically, Klapper et al. do not describe or suggest data relating to at least one Function block applied to control a target PLC system that cannot be controlled by applying the Cause and Effect notation. Rather, Klapper et al. describe inputting all information for a plurality of causes, effects, and intersections, required for a matrix, by using a programming tool, and transferring the information directly to a programmable logic controller. Klapper et al. further describe uploading a database to a computer for editing, modification and/or comparison to a saved copy of the matrix and transferring the edited/modified version back to the PLC. Accordingly, Klapper et al. do not describe or suggest at least one Function block applied to control a target

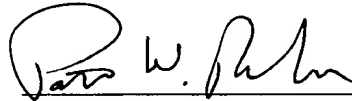
PLC system that cannot be controlled by applying the Cause and Effect notation. For the reasons set forth above, Claim 47 is submitted to be patentable over Klapper et al.

Claims 48-50 depend, directly or indirectly, from independent Claim 47. When the recitations of Claims 48-50 are considered in combination with the recitations of Claim 47, Applicant submits that Claims 48-50 likewise are patentable over Klapper et al.

For at least the reasons set forth above, Applicant respectfully requests that the Section 102 rejection of Claims 1-50 be withdrawn.

In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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